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graphic arts monthly

When Curves Diverge

Paper Supply Peaks, But Demand Falters

Action in Labels, Report on New England

VOLUME 63, NUMBER 1

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THE MAGAZINE OF THE PRINTING INDUSTRY

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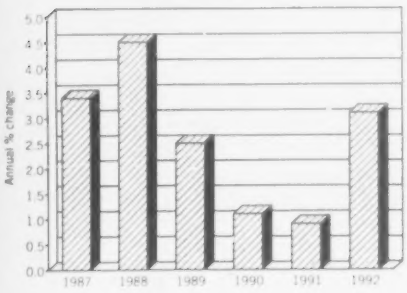
How 1991 Is Shaping Up



The economy is in the midst of a slowdown that is expected to last through the middle of the year. The overall economy is projected to grow 0.9% this year, just below the estimated 1.1% growth rate for 1990. After reaching a low point of growth in 1991, the economy should show substantial improvement next year. This expected upturn is based on the assumption that the Iraqi crisis comes to a peaceful resolution and oil prices decline.

In many ways, economic trends in 1991 will be similar to those of this past year. Industrial markets will outperform consumer markets, exports will grow faster than the overall economy, and housing investment will be weak. Increases in exports, coupled with business investment in equipment, have helped to keep the normally volatile industrial sector at reasonably strong levels. In 1991, these trends will continue, as exports rise 3.2% and equipment investment gains 2.5%.

The consumer sector, on the other hand, will remain weak as consumers try to work off excessive debt levels and avoid additional debt accumulation. Slower income growth and weakening economic conditions caused consumers to trim their spending plans. This situation was exacerbated by the Middle East crisis, which sent consumer confidence plunging. Confidence and spending levels will not resume until consumers see some clear signs of an upturn. Expect consumer spending to grow 0.6% this year, slower than the 1.2% gain expected in 1990.

The Bureau of Labor Statistics recently revised and converted the industry employment and wage data to correspond with the new Standard Industrial Classification (SIC) codes. Specifically, 15% of gravure printing employees and 25% of engraving and plate printing employees are now considered part of platemaking trade services. Prior to these revisions, commercial printing employment stood at 554,000 in 1988. Employment growth registered 5% in 1988 and 3.5% in 1989. Now, 1988 employment stands at 541,000, and growth rates are slower at 3.5% and 0.9%, respectively.

PRINTING INDUSTRY SUPPLY INDICATORS

				Annual % Change			
	Sep 89	**Aug 90**	**Sep 90**	**1989**	**1990**	**1991**	**1992**
Employment							
Printing & publishing (1)	1558.9	1577.7	1572.9	1.0	1.1	1.6	3.0
Commercial printing (1)	545.5	550.4	548.8	0.9	1.4	1.1	2.9
Productivity							
Printing & publishing (2)	115.8	117.7	116.4	5.0	1.8	2.5	0.3
Average Hourly Earnings							
Printing & publishing (3)	11.07	11.30	11.41	3.4	3.4	3.4	3.8
Commercial printing (3)	11.36	11.630	11.73	3.3	3.5	3.5	4.0
Paper shipments							
Coated paper (4)	610	678	630	-2.6	3.7	5.0	2.4
Uncoated groundwood (4)	152	147	137	10.0	-1.7	1.2	3.1
Uncoated free sheet (4)	885	1012	928	-2.6	3.4	2.5	4.1
	Q2/89	**Q1/90**	**Q2/90**	**1989**	**1990**	**1991**	**1992**
Graphic Arts Machinery							
New orders (5)	140.9	151.8	139.3	4.0	1.9	7.7	4.2
Shipments (5)	177.1	146.4	145.7	1.5	-5.5	4.1	6.1
Graphic Arts Supplies							
Shipments (5)	153.5	150.9	157.3	4.5	3.7	4.9	4.1

(1) Thousands of employees, U.S. Department of Labor. (2) Index, 1977=100. Cahners Economics. (3) Dollars per hour, U.S. Department of Labor. (4) Thousands of short tons, American Paper Institute. (5) Index, 1982=100. National Printing Equipment and Supply Association. All forecasts by Cahners Economics.

Labels Show Healthy Growth

Looking for a fast-action, high-energy marketplace? Well, labels is it, believe it or not.

If you're opening a printing business today, here's one word of advice: labels. With the most popular label types having seen seven years of growth of 12% or more, the label business is better than ever.

About 2,000 printers do a significant portion of their volume in labels; a typical one runs a narrow flexo press and prints pressure-sensitive material, either for the bar code/product identification market, or for the "primary" label market for food and cosmetics. Fewer than 50 label printers, found mostly in the packaging business or integrated in-house wrapper manufacturers, employ gravure.

Label printing is a fast-action, high-energy marketplace characterized by dramatic advances in printing and application technology, birth of the bar code, and demands for six-color, varnished, metallized, and embossed labels adding extra value to the products they decorate.

Electronic prepress systems allow major efficiencies, too, distorting label images to match the curvature of packages and small printing cylinders, and adapting existing label designs for other packages.

Labels and wrappers are often mentioned in the same breath, but they are really quite different. Wrappers, the tubular packages into which such items as candy bars are slipped, comprise a steady business; it is most often integrated into the food manufacturing enterprise it serves, or is produced by specialized packaging companies such as American Can or James River Graphics. Labels, rather than wrappers, are the part of the packaging business most accessible to commercial printers.

By Bill Esler
Midwest Editor

Packaging in consumer goods is decorated either directly via offset or screen printing, or through labels and sleeves. Labels may be applied by wet glue, pressure-sensitive gums, or heat transfer.

Label and wrapper printing is a subset of commercial printing. The dry-gummed and self-adhesive papers supplied to label printers and converters amount to $1.38 billion; the estimated value of labels printed is $3.291 billion, 4.7% of the U.S. print volume, according to *PrintMarkets*. A study by the Gravure Association of America found an added 47 plants configured with eight units of press, most with 36" widths. The output from these plants is run on 114 presses operating 677 units.

Printing 2000, the benchmark study done by SRI International for Printing Industries of America last fall, showed labels and wraps at a volume of $2.6 billion, projected to grow up to 2% each year this decade, but most agree this is probably too conservative an outlook.

Labels, printed on paper or film substrates by flexo, screen, letterpress, offset, or gravure, are most often printed in rolls for automated application. Pressure-sensitive labels are printed on glue-back films and papers faced with liners, silicone coated for easy release. Rotary flexo, letterpress, and offset are commonly employed. Rotary screen printing has made a recent and very successful entry; webs range from 7" to 20" wide.

Dry-gummed labels are more

Peter Neumann

likely printed sheetfed, and in this category appear varnished, metallized, and embossed labels. These are the high-grade type that reflect fine wine vintages and top quality perfumes they decorate.

Labels are applied by food processors or filling operations that package bulk commodities, such as motor oil, into liter bottles with a label. Pressure sensitives are blown in place, and tamped fast. Blow-on technology allows combination business form/labels, where the blown-on label may be used as a reply vehicle for a signed copy of the form.

The fastest-growing labels involve pressure-sensitive films and bar codes, the latter for scanning products and supplies into just-in-time inventories. This group, often preprinted with multicolor logos, has seen growth of 50% or more in recent years. Thermally-imaged label materials are particularly popular, as are laser and ion-deposition labels for producing short runs of variable information.

Typical Products

Package Labels
Pressure Sensitive Labels
Self Adhesive Labels
Flat Labels
Roll Labels
Bar Coded Labels
Flat Wrappers
Heat Sealed Wrappers
Glued Wrappers

Typical Users

Beverage Manufacturers
Cigarette Manufacturers
Package Goods Manufacturers
Pharmaceutical/Drug Manufacturers
Soap/Toilet Goods Manufacturers
Dairy Products Manufacturers
Bakery Items Manufacturers
Confectionery Manufacturers

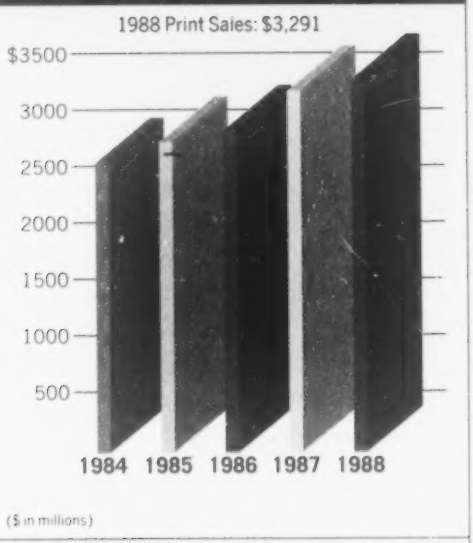
Some printers also market application equipment—such as Chicagoland's Weber Marking Systems, or Dow Systems—for imaging variable information and bar codes on labels (selling the razor, then the blades in the form of labels).

Pressure-sensitive labels, when printed on film, then applied to clear containers, give the appearance of direct screen printing on the package. These have gained a lot of interest, as have composite labels with instant-redemption coupons attached.

Gummed labels recently began a comeback, good news for Fleming Packaging of Peoria, Ill. "For a while we saw a decline in use of our products," says Dick Swain, senior vice president–operations, and a member of the Label Printers of America. "We've seen a movement back to a strong demand for high-performance labels. Our market has expanded dramatically."

Swain says high value-added labels in six to eight colors are demanded with short turn-

Labels & Wrappers



Major Printers—Labels & Wrappers

Rank	Company	Sales in millions
1	Avery International Corp.	110.0
2	Dennison Manufacturing Co.	100.0
3	International Paper Co.	85.0
4	Engraph Inc.	75.0
5	Pitney Bowes Inc.	65.0
6	Fleming Packaging Corp.	63.0
7	Multi-Color Corp.	62.0
8	Nashua Corp.	60.0
9	MPI Label Systems	50.0
10	Data Documents, Inc.	45.0

Source: PrintMarkets

Chart by Annabelle Carter

around, for just-in-time delivery. "And the number of items that we print, the number of items of a particular subject, is based on hundreds of variations on a particular theme," he adds.

Fleming is finishing a plant in Napa, Calif., for high-grade wine labels. With $100 million in sales, Fleming operates seven printing plants.

Screen Print Dow, largest of four sister companies started by Walter Dow that now bill $25 million in sales and employ 165, prints labels on sheetfed screen and offset presses, and sells applying equipment. One Dow unit produces roll labels using flexo, screen, and letterpress, and another produces membrane pads and underlying electronics for touch pad controls.

Adds Bill Donovan, Dow sales vice president, "Advances in ink technology are allowing a wider range of films to be printed rotary screen."

For some printers, development of a label can consume many months, and he must work with the client from the start. "The length of time for a sale is quite long, years in many cases," notes Gerald Gartner, president of Gar-Doc, Milford, N.H., and member of the Tag and Label Manufacturer's Institute. With so much attention to recycling containers, it's not surprising that recycling is a major issue with labels.

Gar-Doc produces pressure-sensitive primary labels for plastic containers, applied as packages are filled, or blown on as the plastic bottles are delivered from a blow molder. It operates seven press lines around the clock, employing 106. Sales are $16 million.

Pressure-sensitive labels have gained popularity, Gartner says, not because they are less expensive than screen printing, but because they are often a more economical way to decorate a container.

Pressure-sensitives are applied from a web of diecut labels, mounted on a siliconized backer paper, from which the unused pattern of paper area, called the matrix, has been stripped away. The label rolls are applied by passing the web around a sharp edge, causing the label to "dispense" while the continuous liner is pulled away from it. This is why rotary presses are most often used. "The advantage of pressure-sensitive labels is in their automatic application," says Gartner. "And that can only be achieved in the web format."

McCourt Label in Philadelphia finds its markets in thermally-imaged labels for printing bar codes. "Over 70% of our business is sold through the business forms distributor," says John Egbert, president. "Because the business forms market has been flat, the distributors have been casting around for new things to sell." He says recycling is an issue for label printers, too, noting, "If you buy a truckload of labels, you get half a truckload of liner, and you have to throw it away."

Chicago-based Weber Marking Systems, with $70 million in sales, has just 40 of its 450 U.S. employees actually printing the $16 million in labels it sells. The company also sells the imaging equipment—laser printers, thermal printers—concentrating on the market for tagging products and packages with scannable bar codes, for automatic identification in manufacturing and distribution.

"The growth of these on-site printing systems is certainly being spurred by use of bar codes," says Weber's Randall Stake, marketing communications manager. The move to such printers was spurred by auto makers' decisions, among others, to require bar-coding on parts delivered to inventory.

Spear Inc., Cincinnati, finds its main focus in screen printed labels, sometimes in conjunction with letterpress. "Film pressure-sensitive labels are the fastest growing decorating method in personal care products today," says Wayne Levoncher, marketing director.

Labels today are more colorful than ever and have a bright future. Presses are able to get a great-looking image onto any type of package, regardless of size or shape.

It's thus safe to say that, as long as there are products to sell, there'll be labels—and label manufacturers—to make them more attractive and easily-identifiable to the consumer.

graphic arts monthly

Sales Rise, Profits Slump

In the past year, commercial printers in New England have had their hands full. They've battled a general economic slowdown there, a prolonged slump in the computer and high-tech industries, a shattered real estate market, and a shake-out among advertising agencies. Still, many have managed to keep their sales levels up; indeed, about one in four posted double-digit sales gains, a recent survey showed.

But profit margins were something else; badly punished by the effects of fierce competition, desperation pricing, a shrinking customer base, excessive capacity, and sharp probes by outside poachers, profits sank across the board.

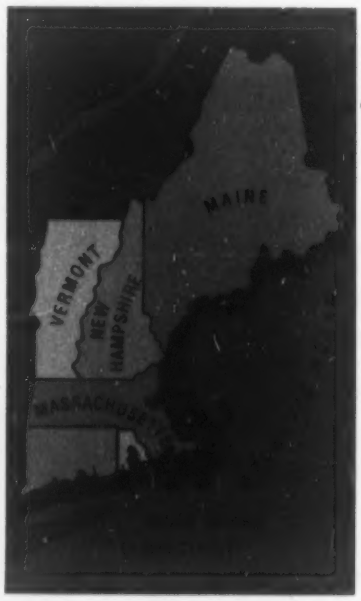
Most telling in the survey of randomly-selected small and medium-sized commercial printers were the individual comments of participants. When asked to size up the printing business in their immediate area, respondents were quite vocal, and in some cases, understandably emotional.

Some said it was their worst year in business, several flatly called Connecticut a depressed economy, and one cautioned printers about the domino effect of failed ad agencies; a few in the region foresaw the death of the printing industry itself.

By Peter Johnston
Special Projects Manager

Yet others were upbeat. One wrote, "We take market share away from others to fuel our 10-year growth average of 25%," another said there was plenty of work for printers who can turn work out fast with quality, and a third called 1990 an all-around better year than 1989.

The outlook in New England is not very rosy, the study showed. Asked to give their perception of the printing business—a confidence index, if you will—seven in 10 thought business was down and just one in 10 called business activity up; the remainder stated business was flat.



Jean Wisenbaugh

To what do they attribute such drastic changes? Losing work to Midwest printers and those in other geographic areas who are lower priced. Plants that overspent on equipment when times were good now having difficulty meeting expenses. The credit crunch. Too much machinery and too few jobs. And fewer customers, more competitors, and lower margins.

Diversified as it is, the *overall* printing industry in New England appears to be stable. But its larger segments—business forms, books, commercial/specialty work, advertising matter—are susceptible to customer slumps, economic malaise, or hesitancy among consumers.

Inside this detachable fold-out form we present a general profile of the graphic arts industry in the six-state region, a close look at commercial printing, demographic data, and listings of leading printers in major markets. Data sources are given on the charts and tables.

The most revealing portion presents survey results among commercial printers. It shows sales changes from 1989 to 1990, the extent of those changes, profitability and capacity comparisons, and a business perception index.

Reprints of this installation of Print Market Trends may be ordered directly from Carol Bien, Cahners Publishing, Reprint Department, 1350 E. Touhy Ave., Des Plaines, IL 60018.

Regional Overview

In all its many forms, the printing industry is an important one in the New England region, offering an array of employment opportunities, revenue sources, and taxes. As the accompanying charts indicate, business forms and books are the leading market segments among the major printers, but commercial printing is an important and broad-based segment. The dollar figures given in the chart are unadjusted for inflation.

COMMERCIAL PRINTING

Value of Shipments

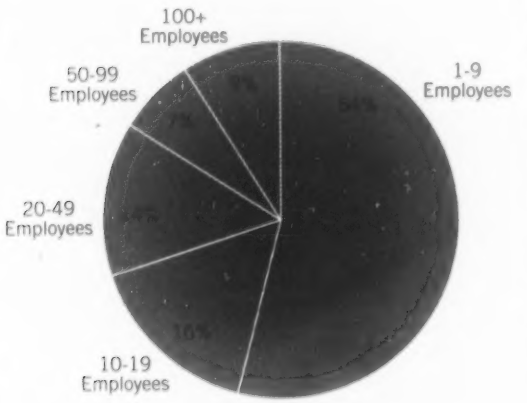
State	Sales, 1990 ($ million)	% of Region	Sales, 1989 ($ million)	% change (1989-1990)
Massachusetts	$2,732	49.6%	$2,556	6.8%
Connecticut	1,404	25.5%	1,320	6.4%
New Hampshire	467	8.5%	431	8.3%
Rhode Island	366	6.7%	343	6.7%
Vermont	343	6.2%	320	7.2%
Maine	191	3.5%	178	7.3%
TOTAL	**$5,503**	**100%**	**$5,148**	**(Average) 6.2%**

Source: PIA Economics Department

Printing Sites

State	Sites
Massachusetts	1,095
Connecticut	666
New Hampshire	159
Rhode Island	179
Vermont	92
Maine	111
TOTAL	**2,302**

All Graphic Arts Plants, by Employee Count



Source: GAM 1990 Plant Equipment Market Profile

Charts and graphs by Lisa Hilgers

All Graphic Arts Plants, by Function

Function	# of Plants
Commercial	1,789
Newspaper (w/Commercial)	77
Newspaper (w/o Commercial)	113
Book & Publication	180
Business Forms	45
Converters	128
Noncommercial	453
Trade	327
Quick Printers	288

Source: GAM 1990 Plant Equipment Market Profile

DEMOGRAPHICS

Population

State	Population	Rank
Massachusetts	5,832,000	12
Connecticut	3,189,000	28
Maine	1,173,000	38
New Hampshire	1,027,000	40
Rhode Island	975,000	42
Vermont	541,000	48
TOTAL	**12,737,000**	

Population Changes

State	Change (1980-86)	Net Migration
New Hampshire	11.5%	67,000
Maine	3.1%	44,000
Vermont	5.8%	8,000
Rhode Island	2.9%	7,000
Connecticut	2.6%	−6,000
Massachusetts	1.7%	−45,000

Educational Attainment

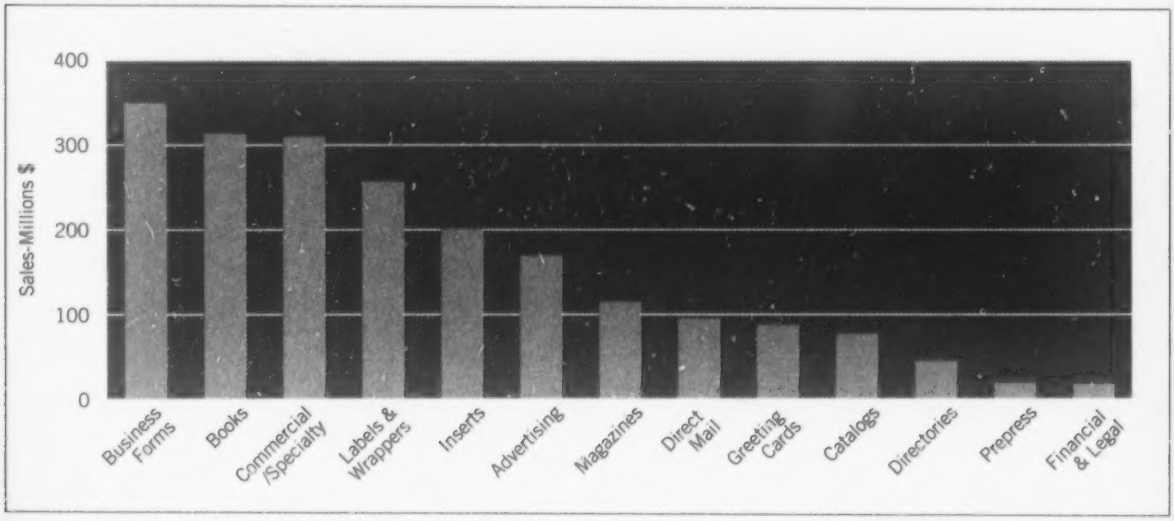
State	High School Graduates	College Graduates
U.S. Average	66.5%	16.2%
New Hampshire	72.3%	18.2%
Massachusetts	72.2%	20.0%
Vermont	71.0%	19.0%
Connecticut	70.3%	20.7%
Maine	68.7%	14.4%
Rhode Island	61.1%	15.4%

Source: U.S. Department of Commerce, Bureau of the Census

Market Profile

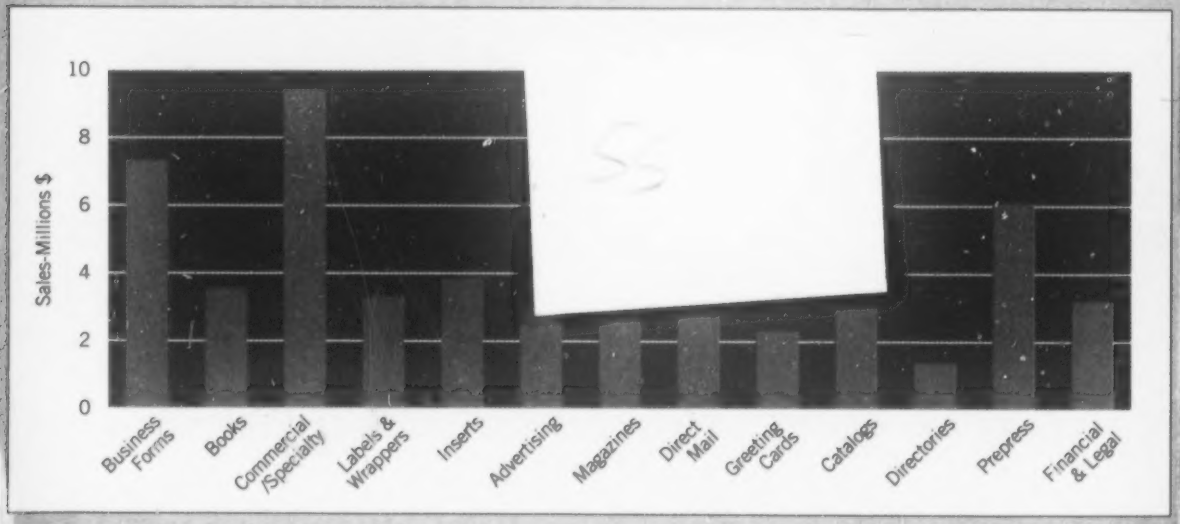
Ranking of Product Segments . . .

The presence of several large business forms printers, together with significant amounts of forms production by other plants printing other matter, results in this product segment leading all others in New England. However, book manufacturing, commercial/specialty, and labels and wrappers segments follow closely in the amount of annual sales generated by larger printers in the region. These bar charts are presented in similar form to simplify comparison between printing intensity in the New England region and in the U.S. All figures here are based on 1989 data.



. . . Compared to National Totals

It's not surprising that, on the national scene, the commercial/specialty segment leads all 13 product categories by size, accounting for some $9.4 billion in annual sales, according to the parameters in this study. Business forms is the second-largest category, advertising printing runs fifth, and freestanding inserts is sixth overall. In these four largest categories, the makeup of the industry in New England matches up nicely with the profile of U.S. printing intensity in terms of segment ranking. Also note how smallest segments match up in this comparison.



Leading Printers in Major Markets

BUSINESS FORMS PRINTERS

COMPANY	SALES
New England Business Service, Groton, MA	115.0
Uniform Printing & Supply, Acton, MA	55.0
Wheeler Group (Pitney Bowes), New Hartford, CT	26.0
Vermont Computer Forms/Grafton, Grafton, VT	25.0
Dennison Manufacturing, Waltham, MA	25.0
Recording and Statistical Corp., Darien, CT	20.0
Ham Business Forms, Springfield, MA	20.0
Formprint, Portland, ME	19.0
Regal Press, Inc., Norwood, MA	16.5

BOOK PRINTERS

COMPANY	SALES
R.R. Donnelley/Hudson Div., Hudson, MA	85.0
Arcata Graphics/Halliday Div., West Hanover, MA	48.0
Murray Printing (Courier Corp.), Westford, MA	37.0
Semline, Inc. (Quebecor), Braintree, MA	35.0
Rand McNally/Taunton Div., Taunton, MA	30.0
Book Press, Inc. (Quebecor), Brattleboro, VT	25.0
ZBK Publications, Wilmington, MA	15.0
Alpine Press (Courier Corp.), Stoughton, MA	13.0
Federated Lithographers, Providence, RI	12.0
Concord Litho, Concord, NH	6.5

COMMERCIAL/CAMEO/SECURITY PRINTERS

COMPANY	SALES
Dennison Manufacturing, Waltham, MA	60.0
New England Book Components, Hingham, MA	27.0
Acme Printing, Wilmington, MA	20.5
Finlay Brothers Company, Bloomfield, CT	19.5
Screenprint/Dow, Wilmington, MA	13.5
The Nimrod Press, Boston, MA	11.0
The Graphic Center, Bloomfield, CT	10.0
Eastern Press, New Haven, CT	9.5
Danbury Printing & Litho, Danbury, CT	9.2
Ames Safety Envelope, Somerville, MA	9.0

LABELS & WRAPPERS

COMPANY	SALES
Dennison Manufacturing, Framingham, MA	100.0
Nashua Corporation, Nashua, NH	60.0
New England Business Service, Groton, MA	27.0
Label Art, Inc. (Transkrit), Wilmington, MA	19.0
GarDoc, Inc., Milford, NH	16.0
Anco Packaging, Shelton, CT	10.5
Wheeler Group (Pitney Bowes), New Hartford, CT	9.0
Screenprint/Dow, Wilmington, MA	8.5
Colonial Label (Denney Keyser), Bridgewater, MA	5.0
Herlin Press, Inc., West Haven, CT	1.5

INSERT PRINTERS

COMPANY	SALES
Treasure Chest/Boston Taunton, MA	40.0
Treasure Chest/Windsor Locks, Windsor Locks, CT	36.0
Maxwell Communications/Providence, Providence, RI	32.0
Barbour & Barbour Associates, Inc., Windsor, CT	25.0
Eastern Color Printing, Avon, CT	18.0
Perry Printing/Trumbull Div., Trumbull, CT	15.0
Spencer Press, Inc., Wells, ME	13.0
Northeast Graphics, Inc., North Haven, CT	10.0
Reminder Press, Vernon, CT	7.0
Danbury Printing & Litho, Danbury, CT	5.0

ADVERTISING PRINTERS

COMPANY	SALES
Mark Burton Inc., Boston, MA	23.0
Daniels Printing, Everett, MA	21.0
W.E. Andrews (Graphic Ind.), Bedford, MA	14.0
Eusey Press (Quebecor), Leominster, MA	13.0
National Bickford Foremost, Providence, RI	12.5
Winthrop Printing, Boston, MA	11.0
Herlin Press, Inc., West Haven, CT	9.0
Nimrod Press, Boston, MA	9.0
Concord Litho, Concord, NH	7.0

MAGAZINE PRINTERS

COMPANY	SALES
R.R. Donnelley/Old Saybrook, Old Saybrook, CT	40.0
The Lane Press, Inc., S. Burlington, VT	31.5
Connecticut Printers Inc., Bloomfield, CT	13.0
Capital City Press, Berlin, VT	11.5
Hughes Printing (Monroe), Trumbull, CT	9.0

DIRECT MAIL PRINTERS

COMPANY	SALES
Northeast Graphics, Inc., North Haven, CT	14.0
Danbury Printing & Litho, Danbury, CT	12.0
Kurt H. Volk, Inc., Milford, CT	11.0
Modern Printing (Quebecor), Brookfield, CT	10.0
Hub Mail Advertising Services, Boston, MA	10.0

How Printers Are Doing

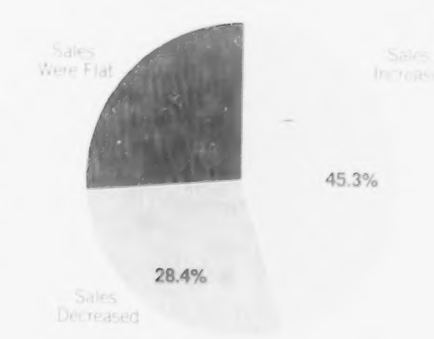
Based on a survey of firms in the region, conducted by Cahners Publishing

Profile of Respondents

Commercial printers in the New England region responding to a recent mail survey reported year-over-year changes in their annual sales, profitability, and operating capacity. They also revealed how they perceived the outlook for business in their area. The following information is as reported by survey respondents; 1990 gross sales were estimated.

Gross Sales in 1990		# of Employees	
Less than $500,000	7.2%	1-4	1.0%
$500,000-749,999	15.4%	5-9	12.2%
$750,000-999,999	11.3%	10-19	26.5%
$1 million-2,499,999	29.9%	20-49	33.6%
$2,500,000-4,999,999	25.8%	50-99	19.3%
$5,000,000-9,999,999	8.2%	100+	7.1%
$10 million or more	2.0%		

How Sales Changed, 1989 to 1990

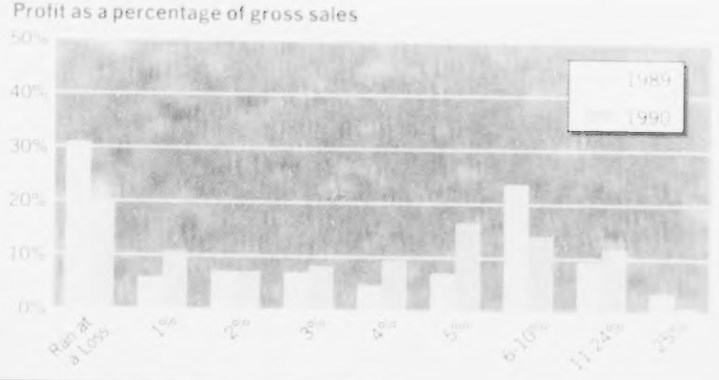


If Sales Increased, How Large Was Increase?

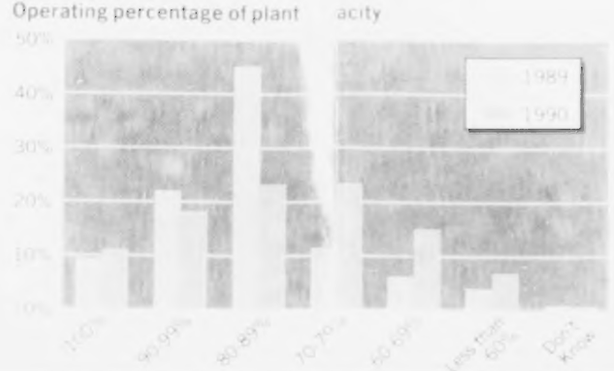
If Sales Decreased, How Large Was Decrease?

PROFITABILITY & CAPACITY

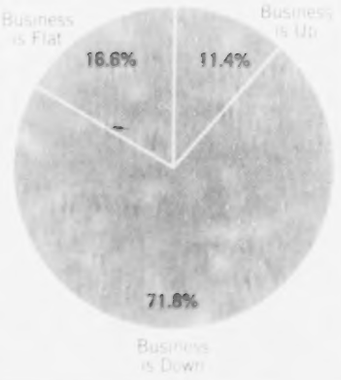
Profit as a percentage of gross sales



Operating percentage of plant capacity



Perception Index



Comments by Printers

New England respondents describe a variety of business conditions in their area and offer suggestions for their causes:

- Economy here is the worst it's been since 1983. Competition is outrageous.
- Customers are cutting back due to the economy.
- Sales are increasing, but profits are decreasing.
- There is too much capacity.
- People just are not buying because money is so tight.
- Sluggish economy.